

AMSAT News Service Weekly Bulletins

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AMSAT NEWS SERVICE

ANS-296

ANS is a free, weekly, news and information service of AMSAT North America, The Radio Amateur Satellite Corporation. ANS reports on the activities of a worldwide group of Amateur Radio operators who share an active interest in designing, building, launching and communicating through analog and digital Amateur Radio satellites.

Please send any amateur satellite news or reports to:

ans-editor@amsat.org

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SB SAT @ AMSAT \$ANS-296.01

AMSAT Symposium Weekend Quickly Approaching

AMSAT News Service Bulletin 296.01

From AMSAT HQ SILVER SPRING, MD.

October 23, 2011

To All RADIO AMATEURS

BID: \$ANS-296.01

Time is quickly approaching for the upcoming AMSAT Symposium to be held November 4-6. This year's Symposium marks the 50th anniversary of the launch of the first amateur radio satellite into space. The Symposium is being held in San Jose, CA which is the home of Project OSCAR, the organization that built amateur radio's first satellite. As part of our commemoration, the ARRL is bringing an OSCAR 1 prototype which has been refurbished to help highlight this significant milestone. Our banquet speaker, Lance Ginner, K6GSJ was a member of the team that built OSCAR 1; he subsequently was involved with a number of follow-on amateur radio satellite projects. Lance's presentation promises to be a fascinating look at the early days of amateur radio in space as well as perhaps some lessons learned.

Along with recognizing this significant milestone, the Symposium is an excellent opportunity to learn about the success of ARISSat-1 as well as AMSAT's latest project, Fox and the steps that we're taking to continue to keep amateur radio in space. There are some excellent presentations scheduled that will cover the gamut from satellite engineering to satellite operations to education outreach. This year's "Proceedings of the AMSAT-NA Space Symposium and Annual Meeting", which is provided to every Symposium attendee contains 21 papers and is over 250 pages in length. While not all papers will be presented, there are also several presentations scheduled to be presented where the material was not finished in time for publication.

Along with the outstanding materials presented, Symposium offers a great opportunity to meet the AMSAT leadership (the Board of Directors members as well as Senior Officers), other satellite enthusiasts, and interact with our volunteers who are involved with our engineering projects. Symposium is both a presentation/educational opportunity as well as a social event.

If you haven't yet registered for this year's Symposium, please consider joining us. Details on the Symposium and registering can be found at: <http://www.amsat.org/amsat-new/symposium/2011/index.php>

Please note that deadline for taking advantage of the block or rooms that AMSAT has reserved expires on October 24, so time is indeed running out for making your arrangements. The last time that AMSAT held a Symposium in California was in 2006; this may be the best chance for AMSAT members and others living on the West Coast to participate in a Symposium and have direct interaction with the AMSAT leadership for some time. Hopefully, those of you living in the Bay Area will take full advantage of this opportunity. Alan Bowker, WA6DNR and his team have done a great job preparing for an outstanding weekend in San Jose.

See ya in San Jose!

Barry Baines, WD4ASW
President-AMSAT

[ANS thanks Barry, WD4ASW, for the above information]

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SB SAT @ AMSAT \$ANS-296.02
F0-29 Eclipse Undervoltage Stops Operation

AMSAT News Service Bulletin 296.02
From AMSAT HQ SILVER SPRING, MD.
October 23, 2011
To All RADIO AMATEURS
BID: \$ANS-296.02

Information has been received that the F0-29 analog repeater is currently off the air. The eclipse periods have increased to the point exceeding 27% shadowing which causes an undervoltage fault to shut down the satellite.

The F0-29 control station sent commands to reactivate the satellite during daytime passes over Japan between October 8-10. Also at the present time the control station was experiencing computer hardware problems which slowed progress.

[ANS thanks Mineo, JE9PEL, for the above information]

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SB SAT @ AMSAT \$ANS-296.03
4C1JPG Satellite Operation From 2011 Pan-American Games

AMSAT News Service Bulletin 296.03
From AMSAT HQ SILVER SPRING, MD.
October 23, 2011
To All RADIO AMATEURS
BID: \$ANS-296.03

Members of the "Radio Experimentadores de Occidente" radio club XE1TD will use the special Mexican call 4C1JPG during the 2011 Pan-American Games, currently taking place in Guadalajara. 4C1JPG ("Juegos Panamericanos Guadalajara", the Spanish translation of the event in that Mexican city) will be on 160m through 6m, as well as the satellites through 30 October 2011.

QSL cards will be available, as well as electronic confirmations in both LOTW and eQSL. More information about 4C1JPG, including the Mexican address of the 4C1JPG QSL manager, is available at:

<http://www.qrz.com/db/4C1JPG>

QSL via LoTW, by the Bureau or direct to XE1GZU: Luis Zepeda Hernandez, P.O. Box 5-273, Guadalajara, Jalisco 45042, Mexico.

[ANS thanks Ohio/Penn DX Bulletin #1032 for the above information]

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SB SAT @ AMSAT \$ANS-296.04
FP DXpedition Plans Satellite Operation

AMSAT News Service Bulletin 296.04
From AMSAT HQ SILVER SPRING, MD.
October 23, 2011
To All RADIO AMATEURS
BID: \$ANS-296.04

FP - Eric, KV1J and Jack, KV1E will be active as FP/KV1J and FP/KV1E from Miquelon Island (NA-032) from 25 October to 1 November. Plans are to operate SSB and RTTY, with some CW and PSK31, on 160-10 meters, plus 6m "if indications of openings". FP/KV1J will take part in the CQ WW DX SSB Contest (SOAB HP). QSL via home calls, direct or bureau, and LoTW, Information on satellite activity and other details can be found at www.kv1j.com/fp/october11.html for A0-51 (if available), A0-27, S0-50, S0-67, and H0-68. All FM mode, V/U.

ANS thanks 425 DX NEWS DX Newsletter for the above information]

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SB SAT @ AMSAT \$ANS-296.05
AubieSat-1 Launch Includes Four Additional Satellites

AMSAT News Service Bulletin 296.05
From AMSAT HQ SILVER SPRING, MD.
October 23, 2011
To All RADIO AMATEURS
BID: \$ANS-296.05

The launch of Auburn University's AubieSat-1 satellite has been re-scheduled to 28 October 2011 due to problems found during the system integration of the primary mission. A hydraulic system leak was detected and the cause was found to be a small crack in a hydraulic tube. A replacement tube was manufactured, installed, and retested. Also, a flexible fabric collar connecting two engine system exhaust ducts was found to be damaged following pressurized leak testing. The damaged fabric collar is being removed and replaced.

EXPENDABLE LAUNCH VEHICLE STATUS

Spacecraft: NPP (NPOESS Preparatory Project)
Launch Vehicle: Delta II 7920
Launch Site: Vandenberg Air Force Base, Calif.
Launch Date: Oct. 28, 2011
Launch Window: 2:48:01 a.m. - 2:57:11 a.m. PDT (9 min., 10 sec.)
Orbital Altitude: 512 miles
Note: This is the launch vehicle for AubieSat-1 and 4 other
microsatellites

Satellite: AubieSat-1
Downlink Freq: 437.475 MHz
EIRP: .708W
Modulation Scheme: Interrupted Continuous Wave (IWC)
Protocol: Morse Code
Baud Rate: 20wpm

Satellite: DICE
Downlink Freq: 465 MHz
EIRP: -4.51dBW
Modulation Scheme: OQPSK
Protocol: CCSDS
Baud Rate: Modulation data rate 1.5 megabit,
Actual Tx bit rate 3.0 megabit

Satellite: RAX-2
Downlink Freq: 437.345 MHz
Modulation Scheme: GMSK
Baud Rate: 9600

Satellite: M-Cubed (1)
Downlink Freq: 437.485MHz
EIRP: < 1W
Modulation Scheme: FSK
Protocol: AX.25
Baud Rate: 9600

Satellite: Explorer-1[PRIME] Flight Unit 2
Downlink Freq: 437.505 MHz
EIRP: -0.7dBW
Modulation Scheme: Non-Coherent FSK
Protocol: KISS Custom
Baud Rate: 1200

Additional spacecraft information can be found on the satellite
websites listed below:

M-Cubed:
<http://umcubed.org/>
DICE:
<http://www.sdl.usu.edu/programs/dice>
Explorer-1[PRIME]
<http://ssel.montana.edu/elp/>
RAX-2:
<http://rax.engin.umich.edu/>
AubieSat-1:
<http://space.auburn.edu/>

AubieSat-1 is designed to transmit with a power of about 800 milli-watts on a frequency of 437.475 MHz, plus or minus Doppler correction. The beacon signal, along with telemetry, will be sent using A1A continuous wave Morse code at 20 words per minute. Additional telemetry from the on board science experiment will use CW transmissions up to 60 WPM.

An internet Echolink conference group is also planned to begin one-half hour prior to launch and continue until about 30 minutes after confirmation of the first receipt of signals from the satellite. Information on the conference groups title will be distributed nearer to the launch for interested stations.

Auburn's famous battle cry, "War Eagle," will be heard from space October 28 when it is transmitted to earth from a student-built satellite known as "AubieSat-1." Auburn University's web page includes a video about their mission:
http://ocm.auburn.edu/featured_story/aubiesat.html

Long-time AMSAT Member John Klingelhoefter, WB4LNM serves as the Technical Advisor in Auburn University's Student Space Program.

[ANS thanks the AubieSat-1 Team for the above information]

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SB SAT @ AMSAT \$ANS-296.06
Prospero to be reactivated on 137.560 MHz

AMSAT News Service Bulletin 296.06
From AMSAT HQ SILVER SPRING, MD.
October 23, 2011
To All RADIO AMATEURS
BID: \$ANS-296.06

Attempts are being made to reactivate Prospero, the United Kingdom's first satellite launched on a UK-built rocket, Black Arrow, on October 28, 1971 and it is hoped Amateur Radio operators will be able to hear the signals.

Roger Duthie M0RJA provides details of tests to be carried out over the next two weeks:

Some of you may have heard that a team in the UK are trying to recontact an old British launched satellite for the anniversary of its launch (28th October 1971).

We've been given a licence to transmit and will be testing our reengineered ground-segment in the next fortnight. The passes we are going to concentrate on will be as far out west as possible, as to minimise QRM from Europe. Earth is a lot more EM noisy than it was in 1971.

If anyone wants to try and tune in to the downlink, you can help ID any response we get from the old bird. To avoid interference the downlink is only planned to be active when the satellite is in range of the United Kingdom. The passes are summarised here:

<https://public.sheet.zoho.com/public/rjaduthie/prospero-passes-in-the-next-fortnight>

There are other passes, though these are the ones which are out west. We'll see how we do.

Roger J A Duthie M0RJA
Email: rjad at mssl.ucl.ac.uk

Prospero real-time orbital tracking page
<http://www.vk3ukf.com/Space/GadgetSatProspero.htm>

Audio recordings of the 0.3 watt phase modulated signal with 2048

bit/s PCM from
Prospero on 137.560 MHz can be heard on the Sounds from Space site
of Matthias Bopp DD1US: <http://www.dd1us.de/spacesounds%204.html>

Experiments on the Prospero satellite
<http://www.uk.amsat.org/2011/09/08/experiments-on-the-prospero-satellite/>

Plan to revive 1970s UK satellite on 137.560 MHz
<http://www.uk.amsat.org/2011/09/05/1970s-uk-satellite-to-be-revived/>

[ANS thanks Roger, M0RJA, for the above information]

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SB SAT @ AMSAT \$ANS-296.07
SatPC32 Version 12.8b Available

AMSAT News Service Bulletin 296.07
From AMSAT HQ SILVER SPRING, MD.
October 23, 2011
To All RADIO AMATEURS
BID: \$ANS-296.07

SatPC32 version 12.8b is available for download at
<http://www.dk1tb.de/downloadeng.htm>

The main SatPC32 program window now displays more information such
as the date of the Keplerian elements file in use.

Before upgrading your SatPC32 installation, be sure to use the new
program (in the ZIP file) to backup your user configuration. The
upgrade erases all previous user configurations, but the new program
will restore your configurations after upgrading.

The download is a demo version that requires users to enter their
lat/lon each time the program is started. To make the program fully
functional, enter your existing registration code or purchase a
registration code from the AMSAT web site:
<http://www.amsat-na.com/store/category.php?c=Software>

DK1TB, the author of SatPC32 has donated the software to AMSAT.
All sales of SatPC32 are used to support AMSAT.

Here are the changes described in the What's New file:

1. SatPC32, SatPC32ISS, Wisat32 and SuM now support rotor control
of the M2 RC-2800 rotor system.
2. The CAT control functions of SatPC32, SatPC32ISS and Wisat32 have
been expanded. The programs now provide CAT control of the new Icom
transceiver IC-9100.
3. The main windows of SatPC32 and SatPC32ISS have been slightly
changed to make them clearer. With window size W3 the world map can
be stretched (only SatPC32).
4. The accuracy of the rotor positions can now be adjusted for the
particular rotor controller. SatPC32 therefore can output the rotor
positions with 0, 1 or 2 decimals. Corrections of the antenna posi-
tions can automatically be saved. In previous versions that had to be
done manually.
5. The tool 'DataBackup' has been added. The tool allows users to

save the SatPC32 program data via mouse click and to restore them if necessary. After the program has been configured for the user's equipment the settings should be saved with 'DataBackup'. If problems occur later, the program can easily restore the working configuration.

6. The rotor interfaces IF-100, FODTrack, RifPC and KCT require the kernel driver IOPort.SYS to be installed. Since it is a 32-bit driver it will not work on 64-bit Windows systems. On such systems the driver can cause error messages. To prevent such messages the driver can now optionally be deactivated.

7. SuM now outputs a DDE string with azimuth and elevation, that can be evaluated by client programs. Some demo files show how to program and configure the client.

[ANS thanks Wayne Estes W9AE for the above information]

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SB SAT @ AMSAT \$ANS-296.08
ARISS Status - 17 October 2011

AMSAT News Service Bulletin 296.08
From AMSAT HQ SILVER SPRING, MD.
October 23, 2011
To All RADIO AMATEURS
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1. Italian Students Hook Up with Astronaut Mike Fossum via ARISS

Students from Istituto Superiore "G. Curcio," Ispica, Italy participated in an Amateur Radio on the International Space Station (ARISS) contact on Friday, October 14 via telebridge station W6SRJ in California. Mike Fossum, KF5AQG answered 14 questions posed to him by the youth. He talked about what it is like to live in space, the problems encountered while working in microgravity and the experiments being conducted on the Space Station. The contact was integrated into the science curriculum covering astronomy.

2. Amateur Radio Club Contacts ISS

On Saturday, October 15, an Amateur Radio on the International Space Station (ARISS) contact was held between the Amateur Radio Morioka Club located in Morioka, Japan and Satoshi Furukawa, KE5DAW on the ISS. Seventeen students were able to ask questions of the astronaut during the radio connection. Student participants were those who went through difficult times after the tsunami devastation on March 11.

3. Astronaut Participates in JOTA

Astronaut Mike Fossum, KF5AQG participated in the Jamboree on the Air (JOTA) event. Fossum, a scoutmaster, spoke with scouts from several states on Saturday, October 15.

4. Amateur Radio Newsline Covers McFadin Interview

On October 14, the Amateur Radio Newsline Report 1783 included a story about an interview with Lou McFadin, W5DID in which he talks about his work at NASA, amateur radio and ham radio experiments in

space. "Names in the News: Lew McFadin W5DID Interviewed by DX-Coffee" may be viewed here:
<ftp://ftp.arnewsline.org/quincy/News/news.txt>

5. Astronaut Training Status

Two astronaut training sessions are planned for October 18. Dan Burbank, KC5ZSX will take part in a refresher course and Joe Acaba, KE5DAR is scheduled for a preflight session. Burbank is slated to fly with Expedition 29 in November 2011 and Acaba plans to fly with Expedition 31 in March 2012.

[ANS thanks Carol, KB3LKI, for the above information]

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In addition to regular membership, AMSAT offers membership in the President's Club. Members of the President's Club, as sustaining donors to AMSAT Project Funds, will be eligible to receive additional benefits. Application forms are available from the AMSAT Office.

73,
This week's ANS Editor,
Lee McLamb, KU40S